




ST Engineering AGIL LCU 302 Remote Street Lighting Controller Owner's Manual

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ST Engineering AGIL LCU 302 Remote Street Lighting Controller



Product Information

Specifications

- **Product Name:** AGIL LCU 302, AGIL LCU 302-1 (NBIoT)
- **Type:** Remote Street Lighting Controller
- **Key Application:** Functional Specifications
- **Supported Bands:** B1/2/3/4/5/8/12/13/18/19/20/25/26/27/28/66/85
- **Features:** Selection of current, low/high power, low power factor, dimming failure, current and light intensity monitoring, light control
- **Parameters Monitored:** Light intensity, line voltage (V), current (mA), active power (KW), power factor, active energy consumption (KWH)

Product Usage Instructions

Installation

Follow the installation guidelines provided in the user manual. Ensure proper electrical connections are made.

Configuration

Configure the controller based on your specific requirements using the provided interface or software.

Monitoring

Regularly monitor the parameters displayed on the controller such as light intensity, current, and power consumption to ensure efficient operation.

Control

Utilize the controller to adjust light intensity, switch between power modes, and address any dimming failures promptly.

Mechanical / Working Environment

Ensure the controller is installed in a suitable mechanical and working environment to prevent damage and ensure optimal performance.

FAQ

- **Q: How do I reset the controller?**

A: To reset the controller, locate the reset button on the device and press it for at least 10 seconds.

- **Q: What should I do if the controller displays a dimming failure?**

A: Check the connected lighting fixtures and power supply for any issues. If the problem persists, contact technical support for assistance.

- **Q: Can the controller be used with LED street lights?**

A: Yes, the controller is compatible with various types of street lights, including LED fixtures. Ensure proper configuration for optimal performance.

Key Application

- Single lamp remote controller with LED driver
- Street lighting

Functional Specifications

- AGIL LCU 302 , AGIL LCU 302-1
- Support Cat NB1, Cat NB2 & Cat M1
- **Frequency Bands:** Cat NB1/NB2 & Cat M1 (B1/2/3/4/5/8/12/13/18/19/20/25/26/27/28/66/85)
- On/Off and dimming functionality with DALI/ 0–10-volt selection
- Real-time reporting and alarms
- **Alarms:** lamp/LED driver failure, over/under voltage, over current, low/high power, low power factor, dimming failure
- **Configuration:** On/OFF/Dimming, over/under voltage, over current and light intensity
- Built in energy meter
- Reports of various luminaire dynamic parameters such as light intensity, line voltage (V), current (mA), active power (KW), power factor and active energy (aggregate) consumption (KWH)
- Auto-positioning with GPS
- Secured data protection, PKI –TLS1.2 over TCP
- RTC supports scheduled task and Photocell for backup light control
- Supports over the air firmware upgrade
- Optional configuration for last gasp

Mechanical / Working Environment

- **Size:** Ø 84 x 98 mm

- **IP Protection:** IP66
- **Weight:** 0.22kg
- **Operating Temperature:** -40°C~+72°C
- **Operating Humidity:** <95%RH Non-condensing

Product Compliant/Certification

- **Safety:** IEC 61347-1:2015+A1:207, IEC 61347-2-11:2001+A1:2017, EN 62493:2015
- **EMC:** EN IEC 55015:2019+A11:2020, EN 61547:2009, EN IEC 61000-3-2:2019+A1:2021, EN 61000-3-3:2013+A2:2021
- **RF:** EN 301908-1 V15.1.1, EN 301908-13 V13.2.1
- **Environment:** EN 60068-2-30:2005, EN 60068-2-2:2007
- **IP Rating:** EN 60529:1992+A1:2000+A2:2013
- **RoHS:** EN 63000:2018
- **Entrusted (IK08):** IEC 62262:2002
- **Reliability (ALT):** IEC 62059-31-1:2008
- CE Conformity
- FCC Certified

Installation

- Standard NEMA 7-PIN interface, plug-and-play
- AGIL LCU 302 is easily installed on top of the lighting fixture utilizing a NEMA socket

Specifications

Relay	1-route, 250V/16A		
AC INPUT		AC OUTPUT	
Voltage Range	96V-276Vac	Voltage Range	96V-276Vac
Frequency Range	50-60Hz	Frequency Range	50-60Hz
Current Range	0-2A	Load Current	2A (max)
Static Power	<1W	Max Load	≤450W @ 230Vac
Surge Protection	320Vac @ 6KV	Isolation	2KV @ 1sec @ 5mA
DATA READING			
Line Voltage Detection	96V-276Vac	Active Power (KW)	Supported
Current Detection	0-2A	Active Energy (KWH)	Supported (Aggregate)
Power Factor	Supported	Light Intensity	Light Sensor
Data Accuracy	≤2%		
DIMMING CONTROL			
Mode	Analog Voltage	DALI	
Output/Interface	Analog Voltage, 0-10V / 1mA	Digital, Dali 1.0	
Dimming Range	0 – 100%	0 – 100%	

COMMUNICATION			
Mode	NB, Cat M1	Antenna Type	Built in (Omni-directional)
Supported Band	B1/2/3/4/5/8/12/13/18/19/20/25/26/27/28/66/85	Antenna Gain	2dBi
GNSS	GPS	Receiver Sensitivity	-102dBm
Data Speed	150Mbps (max)	Output Transmit Power	21dBm
Network Protocol/Security	TCP/PKI-TLS1.2 over TCP		
OTHER FUNCTIONS			
Report	Automatically report alarms and data, query function to report		
Alarms Type	Power failure, under voltage, over voltage, over current		
Backup Mode	Photocell control	Task Mode	Timer control based on RTC
Record Energy	Record total energy consumed and reset		
Fail-Safe mechanism	An autonomous pre-programmed scenario operation for backup protection.		
PRODUCT COMPLIANT/CERTIFICATION			
Safety	IEC 61347-1:2015+A1:2017 IEC 61347-2-11:2001+A1:2017 EN 62493:2015	High Temperature Alternating Damp Heat	EN 60068-2-2:2007 EN 60068-2-30:2005
EMC	EN IEC 55015:2019+A11:2020 EN 61547:2009 EN IEC 61000-3-2:2019+A1:2021 EN 61000-3-3:2013+A2:2021	IP Rating RoHS Entrusted Reliability (ALT)	EN 60529:1992 + A1:2000 + A2:2013 EN 63000:2018 IEC 62262:2002 IEC 62059-31-1:2008
RF	EN 301908-1 V15.1.1 EN 301908-13 V13.2.1	Europe USA	CE Conformity FCC
WORKING ENVIRONMENT			
Temperature	-40°C~+72°C		
Humid	<95% RH Non-Condensing		
IP Rated	IP66		
Entrusted (Impact)	IK08		
Size	Ø 84mm, Height 98mm		
Weight	0.22 KG		

Precautions

Please read this specification carefully before use, so as to avoid any installation error that might cause the malfunction of the device.

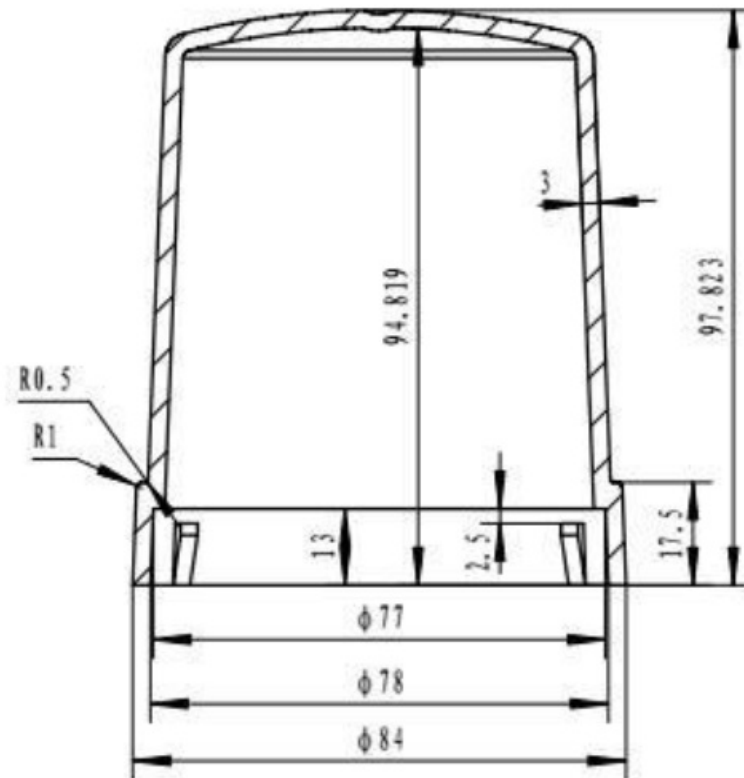
Transportation and Storage conditions

1. **Storage Temperature:** -40°C~+85°C
2. **Storage Environment:** avoid any humid, wet env
3. **Transport:** avoid falling
4. **Stock piling:** avoid over-piling

Notice

1. On-site installation should be done by professional personnel.
2. Do not install the device in a long-term high temperature environment, which might shorten its lifetime.
3. Well insulate the connects during the installation.
4. Wire the device STRICTLY according to the attached diagram, inappropriate wiring might cause deadly damage to the device.
5. Please rotate the device to ensure the NEMA interface is completely connected.

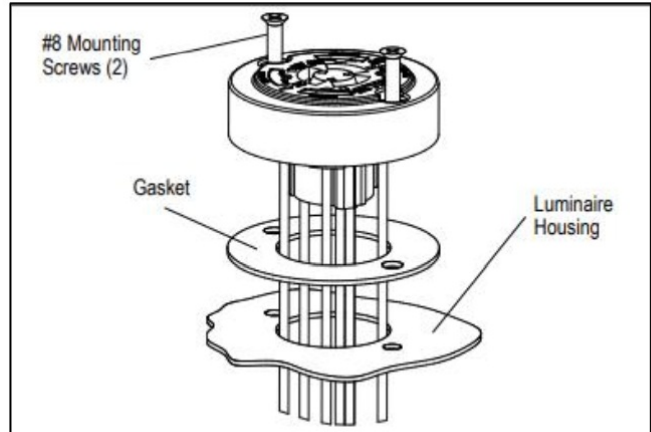
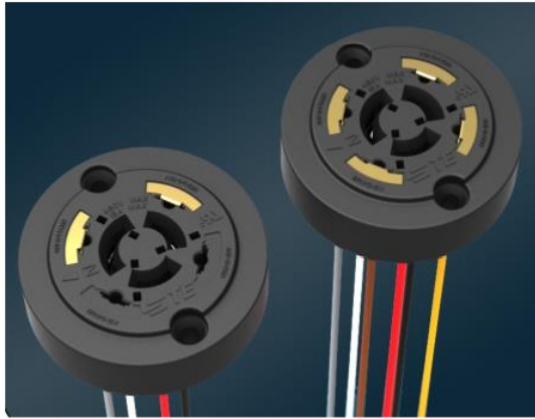
Dimension



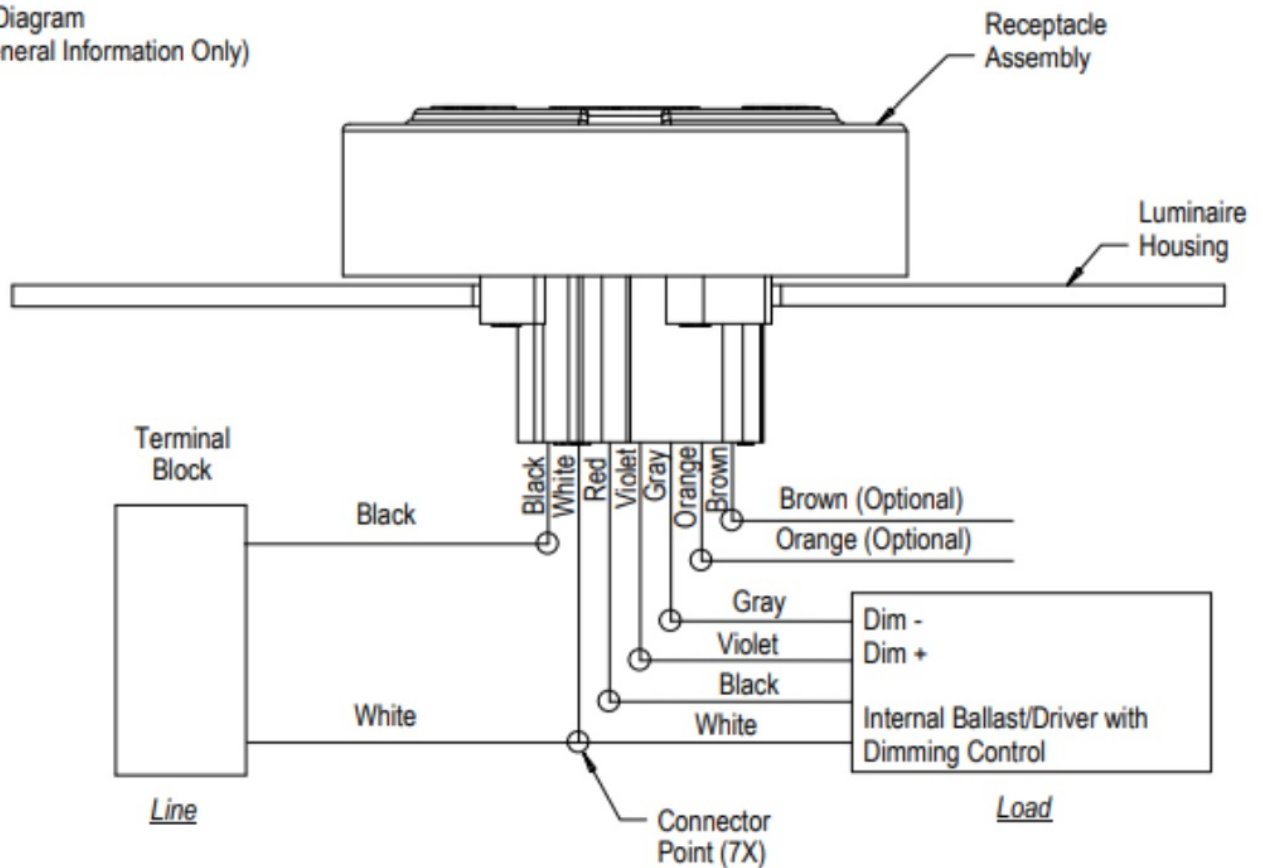
Features

- Support NB, Cat M1 ;
- Standard NEMA 7-PIN interface, plug and play;
- Remotely turn ON/OFF, built-in 16A Relay;
- Support dimming interface: DALI and 0-10V;
- Failure detection: lamp failure, power failure, over voltage, overcurrent, under voltage, power outage;
- Automatically report failure notification to the server and all trigger thresholds are configurable;
- Built-in power meter, support remotely read real-time status and parameters like voltage, current, power and energy;
- Built-in RTC, support scheduled task;
- Built-in photocell, auto control via lux value;
- Built-in network indicator: easy for troubleshooting;
- Optional configuration: last gasp, GPS;
- Support online firmware upgrading(OTA);
- IP66.

Wiring Diagram



Wiring Diagram
(For General Information Only)



FCC

These two models of our company's FCC-certified products: AGIL LCU 302, and AGIL LCU 302-1, make the following statement:

FCC Radiation Exposure Statement:

This equipment complies with FCC radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with a minimum distance 20-cm between the radiator & your body.

FCC Warning

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions:

(1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

NOTE 1: This equipment has been tested and found to comply with the limits for a Class B digital device, under part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference

in a residential installation. This equipment generates uses and can radiate radio frequency energy and, if not installed and used by the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and the receiver.
- Connect the equipment to an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

NOTE 2: Any changes or modifications to this unit not expressly approved by the party responsible for compliance could void the user’s authority to operate the equipment.


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Documents / Resources

	<p>ST Engineering AGIL LCU 302 Remote Street Lighting Controller [pdf] Owner's Manual AGIL LCU 302 Remote Street Lighting Controller, AGIL LCU 302, Remote Street Lighting Controller, Street Lighting Controller, Lighting Controller, Controller</p>
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References

- [User Manual](#)

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